EPA Facility Identifier: 1000 0006 4324 Plan Sequence Number: 1000080380

# **Section 1. Registration Information**

#### Source Identification

Facility Name: COGEN TECHNOLOGIES LINDEN VENTURE, LP

Parent Company #1 Name: EAST COAST POWER LLC

Parent Company #2 Name:

#### Submission and Acceptance

Submission Type: Re-submission

Subsequent RMP Submission Reason: 5-year update (40 CFR 68.190(b)(1))

Description:

Receipt Date: 13-Jun-2019 Postmark Date: 13-Jun-2019 Next Due Date: 13-Jun-2024 Completeness Check Date: 13-Jun-2019

Complete RMP: Yes

De-Registration / Closed Reason:

De-Registration / Closed Reason Other Text:

De-Registered / Closed Date:

De-Registered / Closed Effective Date:

Certification Received: Yes

# **Facility Identification**

EPA Facility Identifier: 1000 0006 4324 Other EPA Systems Facility ID: NJD986632610

Facility Registry System ID:

## Dun and Bradstreet Numbers (DUNS)

932949589 Facility DUNS:

Parent Company #1 DUNS: Parent Company #2 DUNS:

#### **Facility Location Address**

Street 1: c/o Phillips 66 Bayway Refinery **RAILROAD & CHEMICO AVENUE** Street 2:

City: LINDEN State: **NEW JERSEY** 07036

ZIP:

ZIP4:

County: UNION

## Facility Latitude and Longitude

Latitude (decimal): 40.632222 -074.215556 Longitude (decimal): GPS - Unspecified Lat/Long Method: Storage Tank Lat/Long Description:

Horizontal Accuracy Measure:

Horizontal Reference Datum Name: North American Datum of 1983

Source Map Scale Number:

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Owner or Operator

Operator Name: COGEN TECH. LINDEN VENTURE, LP

Operator Phone: (908) 474-0800

Mailing Address

Operator Street 1: P.O. BOX 4400

Operator Street 2:

Operator City: LINDEN
Operator State: NEW JERSEY
Operator ZIP: 07036

Operator ZIP4:

Operator Foreign State or Province:

Operator Foreign ZIP: Operator Foreign Country:

Name and title of person or position responsible for Part 68 (RMP) Implementation

RMP Name of Person: Peter Geissler

RMP Title of Person or Position: VP Operations and Maintenance RMP E-mail Address: Peter.Geissler@jerausa.com

**Emergency Contact** 

Emergency Contact Name:

Ustin Krempecki

Emergency Contact Title:

SHIFT SUPERVISOR

Emergency Contact Phone:

(908) 474-0800

Emergency Contact 24-Hour Phone:

(908) 474-0805

Emergency Contact 24-Hour Phone: Emergency Contact Ext. or PIN:

Emergency Contact E-mail Address: natalie.sesto@NAES.COM

Other Points of Contact

Facility or Parent Company E-mail Address:

Facility Public Contact Phone:

Facility or Parent Company WWW Homepage

Address:

(908) 474-0800

Local Emergency Planning Committee

LEPC: LINDEN EMERGENCY RESPONSE COMM

Full Time Equivalent Employees

Number of Full Time Employees (FTE) on Site: 60

FTE Claimed as CBI:

Covered By

OSHA PSM:

EPCRA 302 : Yes CAA Title V: Yes

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Air Operating Permit ID:

BOP130001

**OSHA** Ranking

OSHA Star or Merit Ranking:

Υ

Last Safety Inspection

Last Safety Inspection (By an External Agency)

Date:

Last Safety Inspection Performed By an External

Agency:

11-Mar-2019

**OSHA** 

**Predictive Filing** 

Did this RMP involve predictive filing?:

**Preparer Information** 

Preparer Name: The WCM Group, Inc., Mary E. Hebert

Preparer Phone: (281) 446-7070 Preparer Street 1: P.O. Box 3247

Preparer Street 2: 110 S. Bender Avenue

Preparer City: Humble Preparer State: **TEXAS** Preparer ZIP: 77347 Preparer ZIP4: 3247

Preparer Foreign State: Preparer Foreign Country: Preparer Foreign ZIP:

Confidential Business Information (CBI)

**CBI Claimed:** 

Substantiation Provided: Unsanitized RMP Provided:

Reportable Accidents

Reportable Accidents: See Section 6. Accident History below to determine if there were any accidents reported for this RMP.

**Process Chemicals** 

Process ID: 1000100348

Description: AQUEOUS AMMONIA SYSTEM

Process Chemical ID: 1000125695

Program Level: Program Level 2 process

Chemical Name: Ammonia (conc 20% or greater)

CAS Number: 7664-41-7 Quantity (lbs): 156172

CBI Claimed:

Flammable/Toxic: Toxic

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# **Process NAICS**

Process ID: 1000100348
Process NAICS ID: 1000101597

Program Level: Program Level 2 process

NAICS Code: 221112

NAICS Description: Fossil Fuel Electric Power Generation

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# **Section 2. Toxics: Worst Case**

Toxic Worst ID: 1000080300

Percent Weight: 30.0
Physical State: Liquid

Model Used: EPA's RMP Guidance for Ammonia Refrigeration

Reference Tables or Equations

Release Duration (mins): 10
Wind Speed (m/sec): 1.5
Atmospheric Stability Class: F
Topography: Urban

Passive Mitigation Considered

Dikes: Yes

Enclosures:
Berms:
Drains:
Sumps:
Other Type:

EPA Facility Identifier: 1000 0006 4324 Plan Sequence Number: 1000080380

# **Section 3. Toxics: Alternative Release**

Toxic Alter ID: 1000085699

Percent Weight: 30.0
Physical State: Liquid

Model Used: EPA's RMP Guidance for Ammonia Refrigeration

Reference Tables or Equations

Wind Speed (m/sec): 3.0
Atmospheric Stability Class: D
Topography: Urban

Passive Mitigation Considered

Dikes:
Enclosures:
Berms:
Drains:

Sumps: Yes

Other Type:

#### **Active Mitigation Considered**

Sprinkler System: Deluge System: Water Curtain: Neutralization: Excess Flow Valve:

Flares: Scrubbers:

**Emergency Shutdown:** 

Other Type: EMERGENCY RESPONSE PLAN

EPA Facility Identifier: 1000 0006 4324 Plan Sequence Number: 1000080380

# **Section 4. Flammables: Worst Case**

EPA Facility Identifier: 1000 0006 4324 Plan Sequence Number: 1000080380

# **Section 5. Flammables: Alternative Release**

EPA Facility Identifier: 1000 0006 4324 Plan Sequence Number: 1000080380

# **Section 6. Accident History**

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# Section 7. Program Level 3

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# **Section 8. Program Level 2**

# Description:

No description available.

# Program Level 2 Prevention Program Chemicals

Prevention Program Chemical ID: 1000063087

Chemical Name: Ammonia (conc 20% or greater)

Flammable/Toxic: Toxic CAS Number: 7664-41-7

Process ID: 1000100348

Description: AQUEOUS AMMONIA SYSTEM

Prevention Program Level 2 ID: 1000062317 NAICS Code: 221112

## Safety Information

Safety Review Date (The date of the most recent review or revision of the safety infomation):

11-Mar-2019

# Safety Compliance Regulations or Design Codes/Standards

NFPA 58 (or state law based on NFPA 58):

OSHA (29 CFR 1910.111):

ASTM Standards:

ANSI Standards: Yes

ASME Standards:

None:

Other Regulation, Design Code, or Standard: API

Comments:

#### Hazard Review

Hazard Review Date (The date of completion of most recent review or update):

15-Jan-2018

Change Completion Date (The expected or actual date of completion of all changes resulting from the

31-Dec-2018

Yes

Yes

hazard review):

## Major Hazards Identified

Toxic Release: Fire:

Explosion:

Runaway Reaction: Polymerization:

Overpressurization: Yes

Corrosion:

Overfilling: Yes
Contamination: Yes
Equipment Failure: Yes

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Loss of Cooling, Heating, Electricity, Instrument Air: Yes

Earthquake:

Floods (Flood Plain):

Tornado: Yes

Hurricanes:

Other Major Hazard Identified:

#### Process Controls in Use

Vents: Yes Relief Valves: Yes

Check Valves: Yes

Scrubbers: Flares:

Manual Shutoffs: Yes
Automatic Shutoffs: Yes
Interlocks: Yes

Alarms and Procedures: Yes

Keyed Bypass:

Emergency Air Supply:

Emergency Power: Yes Backup Pump: Yes

Grounding Equipment: Inhibitor Addition: Rupture Disks:

Excess Flow Device: Yes

Quench System: Purge System: None:

Other Process Control in Use:

#### Mitigation Systems in Use

Sprinkler System:

Dikes: Yes

Fire Walls:
Blast Walls:
Deluge System:
Water Curtain:
Enclosure:
Neutralization:

None:

Other Mitigation System in Use: Fire Water Stationary Monitor

### Monitoring/Detection Systems in Use

Process Area Detectors: Yes
Perimeter Monitors: Yes

None:

Other Monitoring/Detection System in Use: Twice per day (once per shift operator inspections)

## Changes Since Last PHA or PHA Update

Reduction in Chemical Inventory: Increase in Chemical Inventory:

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Change Process Parameters:

Installation of Process Controls:

Installation of Process Detection Systems: Installation of Perimeter Monitoring Systems:

Installation of Mitigation Systems:

None Recommended:

None:

Other Changes Since Last PHA or PHA Update:

Update SOPs and P&IDs; NJ TCPA Catalogue List

of Documents

# **Review of Operating Procedures**

Operating Procedures Revision Date (The date of the most recent review or revision of operating procedures):

17-Jul-2018

#### Training

Training Review Date (The date of the most recent review or revision of training programs):

31-Jan-2019

# The Type of Training Provided

Classroom: On the Job: Yes Yes

Other Training:

# The Type of Competency Testing Used

Written Tests: **Oral Tests:** Demonstration: Yes Yes Yes

Observation:

Yes

Other Type of Competency Testing Used:

#### Maintenance

Maintenance Review Date (The date of the most recent review or revision of maintenance

procedures):

04-Jan-2019

Equipment Inspection Date (The date of the most

recent equipment inspection or test):

18-Mar-2019

Equipment Most Recently Inspected or Tested:

Ancillary piping, valves, indicators, and relief valves undergo daily and monthly inspections and annual

tests as needed

#### Compliance Audits

Compliance Audit Date (The date of the most recent 11-Mar-2019 compliance audit):

Audit Completion Date (The expected or actual date 31-Dec-2019 of completion of all changes resulting from the compliance audit):

# Incident Investigation

EPA Facility Identifier: 1000 0006 4324 Plan Sequence Number: 1000080380

Incident Investigation Date (The date of the most recent incident investigation (if any)):

Incident Investigation Changes Date (Expected or actual date of completion of all changes resulting from the investigation):

Most Recent Change Date: (The date of the most recent change that triggered a review or revision of safety information):

04-Jan-2019

# **Confidential Business Information**

CBI Claimed:

Plan Sequence Number: 1000080380 EPA Facility Identifier: 1000 0006 4324

# Section 9. Emergency Response

# Written Emergency Response (ER) Plan

Community Plan (Is facility included in written community emergency response plan?):

Yes

Facility Plan (Does facility have its own written

emergency response plan?):

Yes

Response Actions (Does ER plan include specific actions to be taken in response to accidental releases of regulated substance(s)?):

Yes

Public Information (Does ER plan include procedures for informing the public and local agencies responding to accidental release?): Yes

Healthcare (Does facility's ER plan include information on emergency health care?):

Yes

#### **Emergency Response Review**

Review Date (Date of most recent review or update 06-Aug-2018 of facility's ER plan):

#### **Emergency Response Training**

Training Date (Date of most recent review or update 29-Nov-2018 of facility's employees):

#### Local Agency

Agency Name (Name of local agency with which the Linden Emergency Response Committee facility ER plan or response activities are coordinated):

Agency Phone Number (Phone number of local agency with which the facility ER plan or response activities are coordinated):

(908) 298-3801

### Subject to

OSHA Regulations at 29 CFR 1910.38: Yes OSHA Regulations at 29 CFR 1910.120: Yes Clean Water Regulations at 40 CFR 112: Yes RCRA Regulations at CFR 264, 265, and 279.52:

OPA 90 Regulations at 40 CFR 112, 33 CFR 154, 49 CFR 194, or 30 CFR 254:

State EPCRA Rules or Laws:

Other (Specify): NEW JERSEY TOXIC CATASTROPHE

PREVENTION ACT (NJAC 7:31); NEW JERSEY DISCHARGE PREVÈNTION RÉGULATION (NJAC

7:1E)

Yes

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# **Executive Summary**

Cogen Technologies Linden Venture Program 2 Executive Summary

System Description

Cogen Technologies Linden Venture (Linden Cogen) owns a 895 megawatt (MW) cogeneration plant in Linden, Union County, New Jersey. The plant is located wholly within the Phillips 66 Bayway Refinery. North American Energy Services (NAES) has been contracted by Linden Cogen to operate the facility. This facility has been in operation since 1992. The land use immediately surrounding the facility is industrial.

Linden Cogen's facility combusts natural gas in six GE Frame 7 combustion turbines to generate electricity. Each combustion turbine is equipped with a heat recovery steam generator (HRSG) that utilizes waste heat from the exhaust to convert water to steam. The steam from each HRSG is combined to drive three steam turbines. Electricity is generated at the gas turbines and the steam turbines. Steam is also piped to offsite industrial facilities. A State-mandated selective catalytic reduction (SCR) system is located within each HRSG to reduce nitrogen oxide (NOx) emissions from the combustion turbine exhaust gas. The SCR consists of a catalyst and injection grid within the HRSG. Ammonia gas is injected through the grid upstream of the catalyst. The ammonia mixes with the exhaust gas, and as the exhaust/ammonia mixture passes through the catalyst, NOx emissions are reduced to nitrogen and water.

#### **Existing Risk Management Activities**

The ammonia system has been regulated under New Jersey's Discharge Prevention regulations (NJAC 7:1E) since 1992. These regulations have required the development of plans and procedures to reduce the risks of releases of hazardous substances. The elements of these programs include standard operating procedures, training, maintenance, and emergency response.

Linden Cogen has also implemented environmental programs and procedures to ensure compliance with all applicable environmental regulations. These programs and procedures, maintained in manuals at the plant, are kept up to date and available to all plant personnel. The programs consist of the environmental permits and plans required to operate the facility. In addition to these programs, Linden Cogen also maintains an EHS program. Elements of the Linden Cogen program include hazard work permits, employee training, and general safety procedures. Linden Cogen is also ISO 9000 certified.

In summary, Linden Cogen has developed, implemented, and maintained environmental programs to ensure that risks associated with all plant operations are minimized and employees, nearby populations, and the environment are protected.

Risk Management Program Summary

The Linden Cogen Facility Manager has overall responsibility for maintaining the risk management program. Responsibilities for specific program elements are shared among Linden Cogen and East Coast Power LLC (Linden Cogen's parent company).

Safety information is maintained at the facility. As there have been no changes to the ammonia system since plant start-up, modifications to the safety information have been minimal. Operating procedures have been implemented at the facility and address the possible operating conditions of the ammonia system. A maintenance program is in place and consists of maintenance procedures, testing and inspection schedules, and a work order system that initiates and tracks work and inspections performed on the ammonia system.

Hot works procedures along with other hazard permits (general work permit, lockout/tagout, etc.) exist at the plant and are applicable to all plant work. Contractors working on the ammonia system or any plant equipment/system are required to comply with the facility's contractor safety program. Currently, there are no planned changes to improve safety under consideration. All facility personnel must complete initial and refresher training on procedures applicable to their position. All operators and maintenance personnel undergo a qualification process which addresses ammonia system operating procedures and/or maintenance procedures along with emergency response training.

Administrative personnel must undergo emergency response training.

Compliance audits will be conducted on an annual basis because the NJ TCPA RMP program 2 has to follow program 3

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requirements. These audits will consist of a risk management program audit and a safety review of the ammonia system. The program audit will review the risk management program and procedures to ensure the program is being implemented. The ammonia system safety review will consist of an audit of the ammonia system and operating procedures and interviews with plant personnel to ensure that the ammonia system is designed and operated in accordance with the appropriate safety information.

Employee participation has always been implemented at the facility. Employees are included in hazard reviews and incident investigations even though it is not a requirement of the RMP regulations. In addition, employees conduct self-assessments (plant audits conducted by employees), hold monthly safety meetings and daily safety talks, conduct annual drills and participate in safety committees. Incident investigation procedures have been implemented at the facility since start up.

A hazard review was conducted in 2013. The hazard review identified the hazards associated with the process, opportunities for equipment malfunctions or human errors that could cause an accidental release, safeguards used or needed to control the hazards or prevent equipment malfunctions or human error, and steps used or needed to detect or monitor releases. Once the hazard review was completed, a list of recommendations was developed and reviewed by plant personnel and management. The recommendations have been implemented at the site to further reduce the risk associated with the aqueous ammonia system.

There have been no accidents or releases from the ammonia system within the last five years.

#### **Emergency Response**

An emergency response program has been implemented at the facility since the plant's construction. The emergency response program includes an emergency response plan and coordination of emergency information and activities with the Linden Fire Department. The emergency response plan contains the information and procedures necessary to respond to a release of any hazardous material at the site. The shift supervisor at the facility is the Emergency Coordinator, as necessary. The facility runs 24/7 with 4 shifts. In addition to Justin Krempecki listed in Section 1.8(a), the other shift supervisors are Philip Esteves, John Buchman and Patrick Neilan.

Emergency information includes a list of emergency response personnel, notification requirements, evacuation procedures, and health/first aid data. Linden Cogen has confirmed with the Linden Fire Department that personnel and equipment necessary to respond to a release of a hazardous substance at the site will be provided. Coordination with the fire department has included providing a copy of the emergency response plan. The fire department has taken part in plant emergency response drills and drill critiques. Linden Cogen also contributes emergency equipment to the fire department. In addition to emergency drills, the fire department tours the facility to familiarize its personnel with plant operations and the locations of potential hazards. In addition, plant personnel are trained in the procedures necessary to respond to emergency releases.